

a data processing system for reading out information from the integrated circuit;

a first dipole antenna for receiving radio wave energy;

a power storage means for storing the radio wave energy received by the first dipole antenna and for supplying energy to the integrated circuit; and

a second dipole antenna for transmitting information from the integrated circuit to a receiver.

28. (New) An identification tag for application to objects comprising in combination:

an application specific integrated circuit on a die having;

a signal receiving system for receiving data containing information and programming into the integrated circuit;

a data processing system for reading out information from the integrated circuit;

a dipole antenna for receiving <sup>radio wave energy from a receiver</sup> and transmitting information from the integrated circuit to <sup>the</sup> a receiver; and

a power storage means for storing the radio wave energy received by the dipole antenna and for supplying energy to the integrated circuit,

wherein all components are located on the die.

29. (New) The identification tag of claim 27, further comprising at least one dipole antenna for receiving radio wave energy.

30. (New) The identification tag of claim 29, further comprising least one dipole antenna for receiving radio energy which is used for receiving radio wave energy.

31. (New) The identification tag of claim 27, further comprising at least one dipole antenna for transmitting information from the application specific integrated circuit.

32. (New) The identification tag of claim 31, wherein the dipole antenna for transmitting information is powered by a charge storage component or charge storage components which store energy.

33. (New) The identification tag of claim 27, wherein energy is received from sources selected from the group consisting of microwaves, infrared, visible light and ultraviolet light.

34. (New) The identification tag of claim 27, wherein the write control component contains at least one memory section for storing information.

35. (New) The identification tag of claim 34, wherein the memory section is a nonvolatile memory.

36. (New) The identification tag of claim 27, wherein at least one multiplexer controls flow of information and data.

37. (New) The identification tag of claim 27, wherein at least one pulse generating circuit is used.

38. (New) The identification tag of claim 27, wherein information received is in analog form.

39. (New) The identification tag of claim 27, wherein information received is in digital form.

40. (New) The identification tag of claim 27, wherein information transmitted is in analog form.

41. (New) The identification tag of claim 27, wherein information transmitted is in digital form.

42. (New) The identification tag of claim 27, wherein there is at least one clock generator circuit.

43. (New) The identification tag of claim 27, wherein there is at least one shift register circuit.

44. (New) The identification tag of claim 31, wherein the dipole antenna component for transmitting information is a back scatter type antenna.

45. (New) The identification tag of claim 27, wherein the integrated circuit is built onto material selected from the group consisting of silicone, germanium, GaAs, sapphire, and diamond.

46. (New) The identification tag of claim 27, wherein the integrated circuit contains test and monitoring points and pads.

47. (New) The identification tag of claim 27, wherein the integrated circuit contains test and monitoring control circuitry.

48. (New) The identification tag of claim 27, wherein the integrated circuit contains circuits for logic, sequencing and switching.

49. (New) The identification tag of claim 28, further comprising at least one dipole antenna for receiving radio wave energy.

50. (New) The identification tag of claim 28, further comprising least one dipole antenna for receiving radio energy which is used for receiving radio wave energy.

51. (New) The identification tag of claim 28, wherein there is at least one dipole antenna for transmitting information from the application specific integrated circuit.

52. (New) The identification tag of claim 51, wherein the dipole

antenna for transmitting information is powered by at least one charge storage component which stores energy.

53. (New) The identification tag of claim 28, wherein energy can be received from sources selected from the group consisting of microwaves, infrared, visible light and ultraviolet light.

Sub. 54. (New) The identification tag of claim 28, wherein the write control component contains at least one memory section for storing information.

55. (New) The identification tag of claim 54, wherein the memory section is a nonvolatile memory.

56. (New) The identification tag of claim 28, wherein at least one multiplexer controls flow of information and data.

57. (New) The identification tag of claim 28, wherein at least one pulse generating circuit is used.

58. (New) The identification tag of claim 28, wherein information received is in analog form.

59. (New) The identification tag of claim 28, wherein information received is in digital form.

60. (New) The identification tag of claim 28, wherein information transmitted is in analog form.

61. (New) The identification tag of claim 28, wherein information transmitted is in digital form.

62. (New) The identification tag of claim 28, further comprising at least one clock generator circuit.

63. (New) The identification tag of claim 28, further comprising at least one shift register circuit.

64. (New) The identification tag of claim 51, wherein the dipole antenna for transmitting information is a back scatter type antenna.

65. (New) The identification tag of claim 28, wherein the integrated circuit is built onto different materials selected from the group consisting of silicone, germanium, GaAs, sapphire, or diamond.

66. (New) The identification tag of claim 28, wherein the integrated circuit contains test and monitoring points and pads.

67. (New) The identification tag of claim 28, wherein the integrated circuit contains test and monitoring control circuitry.